Differences in mental health between adults in stepfamilies and 'first families'

ESRC Centre for Population Change Working Paper
Number 10

CPC
centre for population change

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January 2011

ISSN2042-4116

E·S·R·C
ECONOMIC & SOCIAL RESEARCH COUNCIL

ABSTRACT

This study used longitudinal data from the UK National Child Development Study (*N* = 5844) to examine whether mental health measured at age 42 was associated with living in a stepfamily. Accounting for the potential selection of those with mental health problems at the onset of family formation (at age 23) into, or out of, stepfamilies we show that stepparents, their partners and particularly those in dual stepparent families all had worse mental health than parents in 'first families'. It was also found that the mental health of men was worse if they were a stepparent than if they were the partner of a stepparent, while the reverse was the case for women.

KEYWORDS

Gender; Health; Longitudinal; Mental Health; Selection effects; Stepfamilies

EDITORIAL NOTE

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The ESRC Centre for Population Change Working Paper Series is edited by Teresa McGowan

ESRC Centre for Population Change

The ESRC Centre for Population Change (CPC) is a joint initiative between the Universities of Southampton, St Andrews, Edinburgh, Stirling, Strathclyde, in partnership with the Office for National Statistics (ONS) and the General Register Office Scotland (GROS). The Centre is funded by the Economic and Social Research Council (ESRC) grant number RES-625-28-0001.

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DIFFERENCES IN MENTAL HEALTH BETWEEN ADULTS IN STEPFAMILIES AND 'FIRST FAMILIES'

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1. INTRODUCTION

Over the past few decades there have been a number of significant changes in household arrangements in much of the developed world. What some would call the 'second demographic transition' (Van de Kaa, 1987; Surkyn & Lesthaeghe, 2004) has seen fewer and later marriages, rising rates of cohabitation, divorce and single parenthood, and childbirth at older ages than in the recent past. One outcome is the growing number of stepfamilies where parents, whether single, separated, widowed or divorced, form new marriages or partnerships. Of those marrying during the 1990s in the UK it is predicted that nearly 50% will divorce (Allan, 1999) and many divorcees will form new partnerships. McConnell and Wilson (2007) estimated from the most recent 2001 UK Census that stepfamilies make up around 5.3% of all families (a total of 876,000) in the UK and about 9.6% of all families with dependent children (691,000). Many of these involve unmarried cohabitation as remarriage rates for men, which are generally higher than for women, declined quite dramatically from 227 per 1,000 divorced men in 1972 to 46 per 1,000 by 2004 (McConnell & Wilson, 2007). From the UK General Lifestyle Survey, we know that of divorced men aged 25 to 34, 53% are cohabiting, compared with 46% of never married singles in the same age group (ONS, 2010).

The literature on stepfamilies has grown significantly over the last decades. Much of this research focuses on marital quality and the marital conflict that may arise as a result of remarriage and the creation of different forms of stepfamily (Barrett, 2000; Bierman, Fazio, & Milkie, 2006; Brown & Booth, 1996; MacDonald & DeMaris, 1995). Marriage has been associated with improved well-being and mental health (Afifi, Cox, & Enns, 2006; Gove, 1972; Johnson & Wu, 2002), protects against unhealthy behaviour (Waite, 1995), offers social and mental support, and care in times of (mental) illness (Pearlin & Johnson, 1977), and increased material well-being through economies of scale (Trovato & Lauris, 1989). It has a more positive effect on mental health than cohabitation (Brown & Booth, 1996; Marcussen, 2005), although these positive marriage effects are weaker for second and higher order marriages than for first marriages (Barrett, 2000; Bierman et al., 2006; Blekesaune, 2008; Demo & Acock, 1996), and men also seem to benefit more from marriage than women in the long run (Strohschein, McDonough, Monette, & Shao, 2005). At the

same time, mental health is negatively influenced by partnership breakdown and by the state of being separated, divorced or widowed (Booth & Amato, 1991; Bulloch, Williams, Lavorato, & Patten, 2009; Johnson & Wu, 2002; Soons, Liefbroer, & Kalmijn, 2009; Wade & Pevalin, 2004), especially for those with young children (Williams & Dunne-Bryant, 2006). Shapiro (1996) considered psychological distress among remarried and divorced people, showing that the remarried have lower rates of economic and psychological distress than the divorced. No comparisons were however made with those in first marriages or with cohabiting groups, nor were the effects of stepchildren considered.

We should, of course, also recognise that in both cases there may be a relationship in the opposite direction, as healthier people are more likely to marry than the unhealthy (Hu & Goldman, 1990; Lillard & Panis, 1996) and less healthy people are more likely to separate (Blekesaune, 2008; Gardner & Oswald, 2006; Hope, Rodgers, & Power, 1999; Mastekaasa 1994; Wade & Pevalin, 2004). It is therefore important to account for such potential selection processes in any analysis of family status influences on health.

Another strand of literature moves beyond marital status to consider the relationship between having children ('parenthood') and mental health (Cunningham & Knoester, 2007; Evenson & Simon, 2005; McLanahan & Adams, 1989). Overall, it appears that parenthood has a negative impact on mental health. For example, McLanahan and Adams (1989) showed that parenthood has a negative effect on some measurements of psychological well-being, a finding replicated more recently (Cunningham & Knoester, 2007), although the outcomes vary by gender, with women faring worse (Bird 1997; Hansen, Slagsvold, & Moum, 2009). The magnitude of the impact differs between countries, with parents in countries with limited child support policies reporting more distress than parents in countries with more generous policies (Hansen et al., 2009; Savolainen, Lahelma, Silventionen, & Gauthier, 2001). As parenting may have an effect on mental health, this raises the question of whether stepparenting may have an additional impact beyond that found for 'first families'. (Note that we use the term 'first families' to refer to couples with their own biological or adopted children. We have put the term in quotation marks to avoid the suggestion that these families are in any way preferable to other types of family.)

Various studies have focused more directly on the relationship between being a stepparent and a range of outcomes including: overall well-being; role clarity; marital quality; psychological adjustment; parenting satisfaction; or quality of adult-child relationships. Coleman, Ganong, and Fine (2000) could find only a small number of studies focusing on the psychological health of adults. This is something of a surprise, given the extensive literature that relates health to family status more broadly. One study compared a range of psychological and well-being outcomes (including depression) for parents in 'first families' and stepfamilies, and found no differences (Fine, Donnelly, & Voydanoff, 1986), although this was mainly a descriptive study which took no account of possible selection effects. MacDonald and DeMaris (1996) also noted that, while we may imagine that stepfamily life would be stressful, there are benefits from being a stepparent or partner of a stepparent. Those who have had a partnership and children before are more experienced and knowledgeable parents, and this can lead to a more equal division of household tasks (including child care) between stepparents, which in turn may enhance marital quality (Ishii-Kuntz & Coltrane, 1992). Stepparents frequently miss the early years of parenthood, which is often regarded as the most difficult stage of child raising. The shock of parenthood may therefore be stronger for adults in 'first families' than in stepfamilies. Indeed, singles with parenting experience have been found to be more willing to embark on a partnership with a prospective partner who has children than singles without parenting experience (Goldscheider & Kaufman, 2006).

Of those studies that have looked more directly at the relationship between living in a stepfamily and mental health or well-being of adults, many are somewhat older (Ambert, 1986; Clingempeel & Brand, 1985; Coleman & Ganong, 1990), are based on small samples (Mason, Harrison-Jay, Svare, & Wolfinger, 2002; Saint Jacques, 1996; Schultz, Schultz, & Olson, 1991), or focus on one particular subgroup (Marsiglio, 1992; Weaver & Coleman, 2005). The findings are mixed, at least in part because of the different methodological approaches adopted. Ferri and Smith (1998), using data from the National Child Development Study (NCDS), suggested that adults in stepfamilies are more likely to express 'negative feelings' and suffer from depression than those in first families. This provides some support for the expectation that the mental health of adults in stepfamilies is worse than in 'first families'. But their study was mainly descriptive and it failed to control for the potential selection

effects described above. More recently, DeLongis and Holtzman (2005) found that stress levels of partners in stepfamilies were significantly higher than for partners in 'nuclear families', reinforcing the expectation of negative outcomes for stepparents and their partners.

Here we focus explicitly on the mental health implications of living in a stepfamily for the adults in those families. Following Coleman et al.'s (2000) recommendation that more longitudinal studies of the effects of stepparenting are required, we use British birth cohort data from the NCDS to test whether stepparents and their partners have worse mental health outcomes than those in 'first families'. We pay particular attention to selection issues in our study design, by using a difference-in-difference approach which allows us to explore the change in mental health status which accompanies the transition into a stepfamily. We believe that this is the first study to examine the relationship between living in a stepfamily and mental health among adults using longitudinal data and controlling for potential selection effects.

2. ADULTS IN STEPFAMILES AND IN 'FIRST FAMILIES'

Social stress theory posits a relationship between social factors and mental health whereby the stress invoked by social discrimination will have a deleterious effect on the mental health of the disadvantaged group (Schwartz & Meyer (2010)). Despite increasing acceptance of non-traditional family forms in most of the Western world (Pryor & Rodgers, 2001), there may be a residual social stigma associated with stepparents and an incomplete institutionalization of stepfamilies (Cherlin, 1978; MacDonald & DeMaris, 1995; Simpson, 1994). Negative cultural images of stepfamilies still endure, as illustrated by the myths of the 'wicked stepparent' (Claxton-Oldfield, 2000); the 'evil stepmother' (Dainton, 1993; Levin, 1997); and the 'abusive stepfather' and 'neglected stepchild' (Fine & Schwebel, 1991). Incomplete institutionalization implies a lack of institutional support for stepfamilies and a lack of legal rights for stepparents, which adds to the difficulties of stepparenting (Ganong & Coleman, 1997; Mason et al., 2002). To the extent that such social discrimination is a source of social stress for stepfamilies, we would expect the mental health of adults living in a stepfamily to be worse than that of natural parents in 'first families'.

According to social role theory, stress may also be the consequence of role overload or lack of role clarity (role ambiguity) (Fine, 1996), and we might expect such stressors to be especially evident for those in the position of 'partner of stepparent' (Fellmann, Galan, & Lloreda, 2008) (see also next section). There is evidence that role ambiguity increases stress (Fine 1996; Johnson et al. 2008) and this in turn may affect mental health. Weaver and Coleman (2005) highlighted role ambiguity in their study of nonresidential stepmotherhood. Drawing on crisis theory (Booth & Amato, 1991; Johnson & Wu, 2002), we might expect the initial period of transition into a stepfamily to be especially stressful as stepparents and their partners face stressors such as grief over the loss of the prior family unit, balancing new intra-family relationships, arranging new family finances, and finding a status quo with the other natural parent of the children. Stress levels may then decline once adults in stepfamilies have settled into their new roles. Nevertheless, Johnson, Wright, Craig, Gilchrist, Lane, & Haigh (2008), employing the conceptual framework of 'stress and coping', found that the role of stepmother causes permanently raised stress levels compared with mothers in 'nuclear families'.

Potential sources of stress for adults in stepfamilies are manifold, ranging from social stigma to the multiple dimensions of role overload and ambiguity. Marital history and parenthood may interact to influence the mental health of stepparents and their partners, reflecting the complex family relationships in stepfamilies compared with 'first families' (Pryor & Rodgers, 2001). By definition, the relationships between stepfamily members are complex, with such persons as (resident or nonresident) stepsiblings and half siblings, and members of connected households, including stepgrandparents and new partners of absent parents (Cherlin & Furstenberg, 1994; Gorell Barnes, 1998). Maintaining all these bonds requires a high level of emotional and practical coordination, and for many living in stepfamilies there may be few role models among their friends and relatives to which they can refer. Our initial hypothesis is, therefore, that adults living in stepfamilies will have poorer mental health compared to adults living in first families. Attention to the complexities of stepfamilies however leads us to refine this hypothesis in order to account for differences among stepfamilies and their adult members.

3. THE COMPLEXITIES OF STEPFAMILIES

Stepfamilies are too diverse to be treated as a single category of family. Whereas in the past stepfamilies tended to result from widowhood, it is now much more common for stepfamilies to be formed as a result of divorce. This introduces additional complexity as the nonresident natural parent of the children is still alive, may themselves have repartnered, and often maintains a contact with the child(ren) (Martin & Le Bourdais, 2008). The relationships between the children and adults in stepfamilies also vary considerably. In the UK around 49.6% of all stepfamilies include children from only the female partner; 8.2% include children from only the male partner; 3.2% have children from both partners; and 39% have some combination of children from previous partnerships and children from the couple together (Wilson & Smallwood, 2007).

Each stepfamily can be classified according to a number of dimensions including: the marital status of the partners; the gender of the stepparent; the residency of the (step)children; whether the couple have common children; whether the stepparent has natural children of him/herself living elsewhere; the age and age range of the children; and the gender of the children. In addition, the interaction of dimensions, such as the gender of the stepparent and of the stepchild creates another layer of complexity (Gorell Barnes, 1998; Pasley, Dollahite, & Ihinger-Tallman, 1993). Various detailed classification schemes have therefore been suggested which aim to summarise the major factors that distinguish stepfamilies (Brand & Clingempeel, 1987; Coleman et al., 2000). Even then, there is increasing recognition that stepfamilies are dynamic, and that the stepparenting experience changes over time, depending on the marital history of the stepparent, and the duration of the current partnership (Barrett, 2000; Bray & Berger, 1993; Hughes & Waite, 2009). It is impossible to account for every distinguishing factor, and some are clearly more important than others. The central focus in this study is on the adults in the stepfamily, and therefore our categorisation is organised around the position of the respondent in the stepfamily. For the analysis, we have created a three category typology: stepparent, partner of stepparent, and ‘dual stepparent’, each of which represents a unique set of circumstances.

The relationship between a *stepparent* and stepchild may be a source of stress because of the lack of a biological bond and the fact that most stepparents do not develop their relationship with the stepchild(ren) from birth (DeLongis & Holtzman, 2005). Earlier studies suggested that men who became stepfathers to younger stepchild(ren) were more satisfied with their role than men who became stepfathers to older stepchild(ren) (Marsiglio, 1992), especially if they lacked parental experience (Ihinger-Tallman & Pasley, 1997) and therefore experienced lower parenting satisfaction than stepfathers with 'natural' children (Everett, 1998). For stepmothers, Johnson et al. (2008) have also shown a link between role clarity and stress levels. Where stepparents idealize stepparenthood beforehand (Mason et al., 2002), a contrast with the reality of stepparenthood may place additional strain on their mental health. We expect these sources of stress to put stepparents at risk of poorer mental health than parents in first families.

We also expect the *partners of stepparents,* who are by definition the natural parent of at least one child in the stepfamily, to be at greater risk of poor mental health compared with stepparents themselves. Several studies have noted sources of friction in stepfamilies, such as different parenting styles (Ferri and Smith, 1998) and less effective communication than in first families (Coleman et al., 2000). These may have a greater impact on the natural parent (usually the mother) who may feel conflicting loyalties to her children and her new partner. Negotiating such conflicts requires a delicate balancing act that is likely to be stressful, with implications for her mental health (Saint-Jacques, 1996). Moreover, most partners of stepparents will have been single parents before they formed a stepfamily with their new partner. Single parenthood has been linked to an increased risk of poor mental health (Afifi et al. 2006; Cunningham & Knoester, 2007) and this heightened risk may continue after previously single parents enter a new stepfamily.

Research on *dual stepfamilies* which include children from both partners' previous partnerships is limited. This is probably due to the relative rarity of this family type, as well as the difficulty of identifying stepfamilies in many secondary datasets (Coleman et al., 2000). One notable exception is the work by Schultz et al. (1991) who compared 'complex stepfamilies' to 'simple stepfamilies' (stepfamilies with one stepparent) on a number of outcomes. Adults in dual stepfamilies were found

to be more egalitarian and have a better sexual relationship, but had more problems with parenting and family adjustment, hinting at both positive and negative impacts on mental health.

Dual stepfamilies often include both resident and nonresident children, which may result in increased stress for stepparents struggling with loyalty conflicts as well as with conflicts between the two types of children themselves (Ambert, 1986). Women in dual stepfamilies have reported smaller support networks and a greater burden of household and (step)childcare tasks compared with stepmothers without natural children, although these elements had only a limited effect on stress levels (Johnson et al., 2008). Financial issues are often another cause of friction in stepfamilies in general (Coleman & Ganong, 1990; Jacobson, 1993), but this can become particularly complicated in dual stepfamilies as financial agreements may need to be brokered between three or more households. Due to their rarity, dual stepfamilies are also most likely to lack role models. Indeed Weaver and Coleman (2005) found that the partners in dual stepfamilies needed a long time to establish interfamilial relationships and to (re)define their own roles as parent and stepparent. Thus overall we expect parents in dual stepfamilies to be at higher risk of poor mental health compared to parents in other stepfamily family types.

Many dimensions of stepfamily arrangements may have an impact on mental health outcomes. It is pivotal to take *gender* into account when studying stepfamilies because the role of a stepmother is generally viewed as very different from the role of a stepfather. Nielsen (1999) showed that stepmother/natural father families reported higher stress levels than natural mother/stepfather families. This was true from the perspectives of both the stepparent and the (step)children. Others have argued that the role of stepmother is particularly stressful because of role conflict (Levin, 1997; Weaver and Coleman, 2005). As Weaver and Coleman (2005, p. 478) asserted: "Herein lies the conflict for stepmothers: it is impossible to simultaneously be closely involved as women in families but distant as stepparents." Yet the evidence on gender differences in the effects of stepparenthood on (mental) health or marital quality is mixed, largely due to differences in the stepparenthood dimensions that were taken into account in previous studies. In most, though, women were found to suffer more than men from the stepparenting experience (Pasley et al., 1993; Coleman et al.,

2000) and, in fact, from parenting in general (Bird, 1997; Hansen et al., 2009). To our knowledge, no studies have consider directly the gendered implications of stepparenting on mental health but those studies which demonstrate gender differences in stress levels lead us to expect that the stepparenting experience places a greater burden on women's than on men's mental health.

The stresses of stepparenting are also likely to be influenced by the nature and number of *children* in different stepfamily arrangements. While the 'natural' parent of the stepchild has been considered above, the presence of '*common children'* to both partners may also influence the dynamics of the family situation. A common child may increase the quality of the adult partnership in a stepfamily (Ambert, 1986), but not the quality of the relationship between stepparents and stepchildren (White & Booth, 1985). The latter may even worsen for women (Ambert, 1986) or both partners if the common child is born before a solid partnership has been established (Bernstein, 1990). In other circumstances, the birth of a common child may have a positive impact, consolidating the family and engendering "some feeling of completeness" (MacDonald and DeMaris (1995: 396).

In addition, the *location of the children* is important. Nonresident children have been associated with significant parental role strain for fathers (Umberson and Williams, 1993), reduced parental satisfaction (Minton and Pasley, 1996) and a higher probability of depression compared to a range of parent types (Evenson and Simon, 2005). Stepparents may have closer relationships with resident compared to nonresident stepchildren (Ambert, 1986), spend less time with nonresident children and take longer to find a satisfying way of fulfilling their stepparent role, thus increasing role ambiguity (Fine, 1996). Further, conflicts may arise with the custodial parent, especially the custodial mother (Weaver & Coleman, 1995).

Relationships between stepparents and non-custodial natural parents may vary according to the *gender of the adults* involved. Marsiglio and Hinojosa (2007) showed that a supportive and co-operative relationship between stepfather and non-custodial natural father was quite common. Relationships between stepparents and noncustodial

natural mothers may well be more stressful. Noncustodial mothers, although few in number, are most likely to suffer mentally, both because of the relative rarity of this situation and the circumstances that often surround it (e.g. initial mental health problems, financial problems etc.) (Herrerias, 1994). Of course, custody of children is increasingly being shared between divorced and separated parents, and to different degrees. Johnson et al. (2008) approached residency of stepchildren not as a dichotomy but as a gradual scale (fully nonresidential, mostly nonresidential, evenly residential, mostly residential and fully residential). They found that stepmothers (the focus of their study) with 'mostly nonresidential' stepchildren reported higher stress levels than stepmothers in the other four categories.

Finally, the *gender of children* may also influence stepfamily relations. Research has shown a consistent positive effect of having boys, rather than girls, on marital stability and marital satisfaction (Lundberg, 2005) and on individual well-being of parents (Kohler, Behrman, & Skytthe, 2004), apparently due to the stronger involvement of fathers with sons than with daughters. Parenting satisfaction may also be enhanced, but only for fathers not for mothers (Rogers and White, 1998). Although these positive effects may also be found in stepfamilies, studies explicitly examining child gender in stepfamilies are scarce. Marsiglio (1992), for example, suggested that stepfathers may find it easier to father stepsons than stepdaughters because they share more interests with boys than with girls. On the other hand, it could be that stepsons are more likely to resist developing a close bond with their stepfather when they are still emotionally close to their biological father, and to be more protective of their mothers (Marsiglio 1992). Yet, Marsiglio (1992) reported no effect of gender of the stepchild on stepfathers' parenting satisfaction in his study, although others have found that it is the bond between stepfathers and stepdaughters that is particularly troublesome (Bray & Berger, 1993; Hetherington et al., 1992).

It is evident from previous studies that stepfamily arrangements are complicated by family structure and marital status, the gender of the stepparent, the partner and the children, the residential location of the children, and whether common children are involved. Each of these dimensions may help to explain mental health

differences between stepparents, their partners and those in 'first families'. In this study we account for as many of these factors as practicable. In addition to (step)family variables, we take into account a number of individual-level factors known to be associated with mental health. These are marital status, economic activity, highest educational qualification and social class. On the basis of the literature on marital status and health, we expect married people to have lower mental illness scores than formerly married people (Barret, 2000) and never married people (Gove, 1972; Bierman et al., 2006). We expect cohabitants to take a middle position, because they enjoy the benefits of being in a couple, but cohabiting relationships may be shorter and less formal than married relationships (Marcussen, 2005). Of the economic activity categories, we expect those who work full-time to have the best mental health, followed by part-time workers and then the unemployed and others not working. These latter groups are well known to have poorer (mental) health than those in work, and this may be related both to the positive financial and other effects of being in work, and to selection out of work among those in poorer health (Fryers, Melzer, & Jenkins, 2003). The higher incidence of mental illness among individuals from lower social classes and among the lower educated has also been reported (Lorant et al., 2003; Weich & Lewis, 1998). We expect the mental health of adults in stepfamilies to be negatively affected by living in a stepfamily, even after controlling for these potential individual-level confounders and for the selection of those with poorer mental health into stepfamilies.

4. DATA

Our research question asks whether stepparents and their partners have worse mental health outcomes than those in 'first families'. To investigate this empirically requires data on mental health and other circumstances at different stages in the life course, as well as on potentially complex household arrangements and how they change through time. The National Child Development Study (NCDS), which collects data for a birth cohort containing all children born in a single week in Britain in March 1958, provides one of the few data sets suitable for such a study. The NCDS began with a target sample of 17,634 individuals and includes data on mental health, partnership histories, and other time invariant and time-varying demographic, health and socioeconomic variables. Individuals are tracked through time, and information has been collected from this sample nine times, including waves at birth and then at ages

seven, 11, 16, 23, 33, 42, 46 and 50. Here we use information from the cohort members at ages 23 and 42, because these were waves from which extensive family and household information is available, as well as a comparable mental illness measure. Age 23 is early in adulthood when relatively few people (particularly in the early 1980s) have formed stable relationships and fewer still have become stepparents. Mental health measures at this age thus provide a means of controlling for selection effects whereby those with poorer mental health may be more likely to become stepparents.

As with all cohort studies, the sample decreased in size over time as cohort members dropped out due to death (993 by age 42), permanent emigration (1,190 by age 42) or some other form of nonresponse (such as refusal to engage with the survey or refusal to take part in a single wave because of personal circumstances). Overall attrition was low during childhood but grew as cohort members moved into adulthood (N=4,472 by age 42; Plewis, Calderwood, Hawkesand, & Nathan, 2004), resulting in an achieved sample size of 10,979 at age 42 (100%). For this analysis we imposed two additional conditions: first that respondents had to be included in the age 23 wave, lowering the sample size to 7,600 (69.2% of original sample size); and second that they were not already in a stepfamily at age 23, removing an additional 102 respondents. Our approach focused on the effect of *becoming* a stepparent, or partner of a stepparent, during the period. Lastly, we selected respondents in households with children (resident or nonresident) at age 42, which resulted in a final sample size of 5,844 men and women (53.2% of original sample size), and included information from age 23 (year 1981) and age 42 (year 2000).

Within this sample, there was some item nonresponse, which we addressed directly through the use of multiple imputation with chained equations (see Van Buuren, Boshuizen, & Knook, 1999 for an explanation of this technique and Royston, 2004, 2005 for technical details). We ran five imputations, and analysed them separately. The parameters reported in Tables 2-4 are averaged parameters for a combined analysis of the multiply imputed data (see Rubin, 1987). We also compared the results across imputations and found these to be very similar, indicating that the results are robust and the imputation procedure has yielded valid imputation values.

The results are also similar to the results from a model without imputations, which provides additional confidence in the imputed data. One drawback of analysing the multiple imputed data together is that no measures of model fit can be obtained. Instead we report a measure of model fit (decrease in log likelihood) that is based on only the first imputation. We tried the other single imputations as well, and the results were very similar.

The variables used in the analysis are presented in Table 1. Our dependent variable of interest is mental health, measured using the Malaise Inventory Scale (MIS) as developed by Rutter and Tizard (1970). This is a commonly used measure that is based on 24 questions designed to capture depression and anxieties, and obsessions and phobias. Several studies have tested and confirmed the alpha reliability and internal consistency of this scale (e.g. Hirst & Bradshaw, 1983). Because the distribution of the scale is strongly left-skewed, we take the log of the MIS score. As Chase-Lansdale, Cherlin, and Kiernan (1995, p. 1619) pointed out, the MIS is a screening instrument and a higher score must be interpreted as an indication of a high likelihood of the presence of mental illness and possibly the need for psychiatric help.

We created a five-level categorical variable to distinguish between adults living in different family arrangements: parents in 'first families', single parents, stepparents, partners of stepparents, and stepparents in dual stepfamilies. We define a 'parent' as an adult who has children (biological or adoptive) of his/her own, regardless of whether they are co-resident. A 'stepparent' is defined as an adult who is a partner to someone with children but who is not the biological/adoptive parent to those children (again they may or may not be co-resident). Note that in dual stepfamilies, the adults in the couple are at the same time a parent (to their own children) and a stepparent (to their partner's children). We derive this categorisation from three interview questions: 1 'Who are the members of your household' (where the answer categories include the category 'Child of current spouse/partner'); 2 (for every child the respondent has had) 'Is your present partner the other parent of this child?'; and 3 (for every child the respondent has had) 'Is this child living with you or

elsewhere?'. At age 42 there were 1,378 stepfamilies in the sample, of whom 25.8% had nonresident children of the cohort member (we do not have information on nonresident children of the cohort member's partner). We included both married and cohabiting couples; a considerably higher proportion of stepfamilies were cohabiting (27%) than was the case for all families (9%).

We extracted a number of additional independent explanatory variables expected to be associated with mental health. These include the gender of the respondent, marital status, economic activity status, highest educational qualification and social class. We also included characteristics of the household/family, which we felt may be important mediators in explaining any observed differences between the mental health of those in stepfamilies and those in 'first families', as explained in the previous section. These are the number of children in the household, whether a couple has common children, whether the household includes nonresident children, and the gender of all resident children. Influences from earlier life were excluded as we used a fixed effects modelling approach which accounts for time-constant variables (see below). We estimated separate models for men and women to examine explicitly gender differences in mental health.

	All		Stepfamilies only	
Variables	*N*	%	*n*	%
Gender				
Male	2648	45.3	572	41.5
Female	3196	54.7	806	58.5
Family type				
First family	3836	65.6	--	--
Single parent	630	10.8	--	--
Stepparent	634	10.9	634	46
Partner of stepparent	396	6.8	396	28.7
Dual stepfamily	348	6.0	348	25.3
Gender of children in household				
No children	507	8.7	318	23.1
Only boys	1539	26.3	351	25.5
Only girls	1384	23.7	293	21.3
Boys and girls	2414	41.3	416	30.2
Marital status				
Never married single	87	1.5	14	1
Married	3925	67.2	415	30.1
Remarried	722	12.4	487	35.4
Unmarried cohabiting	504	8.6	371	26.9
Separated/divorced	582	10.0	86	6.2
Widowed	24	0.4	5	0.4
Common children status				
No common children	1421	24.3	790	57.4
Has common children	4423	75.7	588	42.6
Nonresident children status				
No nonresident children	4953	84.8	1022	74.2
Has nonresident children	891	15.3	356	25.8
Economic activity				
Working full-time	3740	64.0	926	67.3
Working part-time	1294	22.1	243	17.6
Unemployed	100	1.7	27	1.9
Not working other	709	12.1	182	13.2
Highest qualification				
None	833	14.3	252	18.3
Secondary	1744	29.8	468	34
Vocational	1378	23.6	304	22.1
Professional	1121	19.2	245	17.8
Degree	768	13.1	109	7.9
Social class				
Unskilled/partly skilled	1054	18.0	276	20
Skilled	2422	41.4	616	44.7
Managerial/professional	2369	40.5	486	35.3
Number of children in hh	1.9 (s.d. 1.01; range 0-8)		1.6 (s.d. 1.2; range 0-7)	
Mental illness score	3.5 (s.d. 3.5; range 0-23)		3.9 (s.d. 3.7; range 0-23)	

Table 1: Gender, Family type and Control Variables: Descriptive Statistics (distribution of categories for categorical variables, and mean, s.d. and range for continuous variables) for all sample members (N = 5844) and for sample members in stepfamilies only (n = 1378)

5. METHOD

One potential problem with standard cross-sectional regression procedures that simply comparing the mental health outcomes for those in 'first families' and 'step families' is that such an approach ignores potential selection effects. There is a possibility that those with poor mental health have a different likelihood of entering stepfamilies, and this would bias the apparent effect of being in a stepfamily on mental health. As described above, it is known that partnership dissolution is associated with declining mental health and partners of stepparents will have experienced such an event. It is also possible that those who choose to become stepparents have different (unobserved) characteristics to others and there is increasing awareness among stepfamily researchers that selection issues should be explored where possible. For example, Evenson and Simon (2005, p. 355) recommended that future research "investigate[s] whether individuals select themselves into – and out of – certain types of parenthood on the basis of their mental health status".

Our initial exploration of selection effects suggested that they may be influential (see first part of the Results section) and to account for this we estimated a fixed effects difference-in-difference model (Freeman, 1984; Angrist & Pischke, 2009). Difference-in-difference models are commonly used for assessing the impact of policy 'intervention'. The change experienced by the group subject to the intervention (the treatment group) is adjusted by the change experienced by the group that does not experience the treatment (the control group). The underlying assumption is that the time trend in the control group is an adequate proxy for the time trend that would have occurred in the treatment group in the absence of the intervention. In our case we took advantage of the longitudinal design of the NCDS data and compared the difference in the mental health scores for those who enter stepfamilies, distinguishing stepparents, partners of stepparents and those in dual stepfamilies, between age 23 and 42 and those who do not. By accounting for the difference in mental health scores *prior* to entering such family arrangements, we correct for the possibility of a sample selection bias and identify the *additional* effect of being in one of a number of stepfamily situations. The use of a fixed effects version of this model means that we account for time-invariant unobserved (and possibly unobservable) individual characteristics. We also account for a range of individual characteristics

that may vary over time by including them as measured variables at ages 23 and 42 and the parameters reported relate to the effect of changes in these circumstances over this period. The 'family type' variable represents family type at age 42.

We present three sets of models for the whole sample, and for women and men separately. Model 1 is a base model controlling only for age and family type. Model 2 includes additional demographic and socioeconomic variables expected to influence mental health. Model 3 additionally includes variables relating to the number of children, their gender, whether there are 'common' children and whether the children are resident. These are some of the underlying factors expected to influence mental health status among adults in stepfamilies.

6. RESULTS

We initially tested whether selection was a factor by comparing the mental health at age 23 of those who ended up in different family types at age 42 (Table 2). This demonstrates that those who entered a stepfamily between ages 23 and 42 had higher mental illness scores at age 23 than those who entered first families. The mean MIS scores at age 23 were highest for those who ended up in dual stepfamilies 19 years later, and lowest for those who ended up in 'first families'. These differences are not large, but they are significant (Pearson Chi Square = 15.54; df = 4) indicating that control for potential sample selection biases is desirable.

	Family type at age 42				
Mental illness score at age 23	First family (*n* = 3836)	Single parent (*n* = 630)	Stepparent (*n* = 634)	Partner of stepparent (*n* = 396)	Dual stepfamily (*n* = 348)
Six or lower	66.3	10.6	10.8	6.7	5.6
More than six	60.0	12.5	11.1	7.7	8.7
Mean mental illness score	2.67	2.88	2.75	2.98	3.23

Table 2: Family Type at Age 42 by Mental Illness Score at Age 23 (row percentages) (N = 5,844) and Mean Mental Illness Score by Family Type

We then implemented our fixed effects, difference-in-difference models. Table 3 presents results for women and men combined. Model 1 shows that mental health scores were significantly higher at 42 than at age 23. Single parents, and stepparents in both stepfamilies and dual stepfamilies had significantly higher mental illness

scores compared to adults in ‘first families’. Model 2 controls additionally for demographic and socioeconomic variables. Never married singles had higher mental illness scores, as did those out of work who were not seeking employment. The results for family type remained broadly consistent, controlling for these additional characteristics. In Model 3 we included variables that relate to the circumstances of the families. These were expected to attenuate the effect of family status, which in Models 1 and 2 was acting as a surrogate for these and other differences. Part-time workers, those out of work not seeking employment and those with degrees all had a higher risk of poor mental health. Importantly, though, in this model family status became non-significant. Those in families with common children and those with only girls had reduced risks of mental illness, while those with nonresident children had a raised risk. It is these household circumstances, rather than stepparenting *per se*, that influence mental health.

	Model 1			Model 2			Model 3		
	B	SE B		B	SE B		B	SE B	
Age 42	0.128	0.017	***	0.162	0.027	***	0.211	0.040	***
Family type (ref = 'first family') * age 42									
Single parent	0.229	0.046	***	0.167	0.065	***	0.032	0.077	
Stepparent	0.084	0.046	*	0.098	0.047	**	0.040	0.051	
Partner of stepparent	0.048	0.057		0.053	0.061		-0.029	0.065	
Dual stepfamily	0.139	0.060	**	0.133	0.066	**	-0.004	0.076	
Marital status (ref = married)									
Never married single				0.100	0.030	***	0.040	0.033	
Remarried				-0.057	0.049		-0.056	0.049	
Cohabiting				0.027	0.043		0.000	0.044	
Separated/divorced				0.044	0.061		0.004	0.061	
Widowed				0.186	0.206		0.147	0.206	
Economic activity (ref = full-time working)									
Part-time working				0.050	0.033		0.076	0.033	**
Unemployed				-0.034	0.052		-0.014	0.052	
Other not working				0.093	0.032	***	0.142	0.034	***
Highest qualification (ref = none)									
Secondary				0.048	0.032		0.041	0.032	
Vocational				0.028	0.040		0.028	0.040	
Professional				0.036	0.044		0.037	0.044	
Degree				0.119	0.074		0.128	0.074	*
Social class (ref = unskilled/partly skilled)									
Skilled				0.040	0.033		0.034	0.033	
Managerial/professional				-0.026	0.038		-0.026	0.038	
Number of children in hh							0.019	0.018	
Gender of children in hh (ref = only boys)									
No children in hh							-0.042	0.059	
Only girls							-0.100	0.036	***
Boys and girls							-0.051	0.036	
Common children status (ref = has none)									
Has common children							-0.142	0.054	***
Nonresident children status (ref = has none)									
Has nonresident children							0.081	0.046	*
Intercept	1.033	0.010	***	0.930	0.037	***	1.022	0.068	***
Decrease in log likelihood (df)				70.67	(14)	***	57.35	(6)	***

Table 3: Fixed Effect Difference-in-Difference Model Estimates for Variables Predicting Mental Illness Score (N = 5,844)
Note: Mental Illness Score measured as log of Malaise Inventory Scale score.
* p < 0.10. ** p < 0.05. *** p < 0.01.

	Model 1			Model 2			Model 3		
	B	SE B		B	SE B		B	SE B	
Age 42	0.195	0.024	***	0.237	0.036	***	0.280	0.053	***
Family type (ref = 'first family') * age 42									
Single parent	0.264	0.055	***	0.173	0.077	**	0.096	0.095	
Stepparent	0.101	0.060	*	0.109	0.063	*	0.059	0.067	
Partner of stepparent	0.211	0.074	***	0.208	0.079	***	0.157	0.085	*
Dual stepfamily	0.132	0.073	*	0.132	0.081		0.055	0.094	
Marital status (ref = married)									
Never married single				0.072	0.044		0.015	0.046	
Remarried				-0.065	0.064		-0.068	0.063	
Cohabiting				0.026	0.056		0.001	0.057	
Separated/divorced				0.084	0.074		0.080	0.075	
Widowed				0.248	0.209		0.255	0.209	
Economic activity (ref = full-time working)									
Part-time working				-0.040	0.037		0.019	0.039	
Unemployed				-0.094	0.075		-0.055	0.076	
Other not working				0.044	0.036		0.144	0.042	***
Highest qualification (ref = none)									
Secondary				0.023	0.041		0.012	0.041	
Vocational				0.018	0.055		0.028	0.055	
Professional				0.031	0.062		0.033	0.062	
Degree				0.046	0.108		0.068	0.108	
Social class (ref = unskilled/partly skilled)									
Skilled				0.018	0.040		0.009	0.040	
Managerial/prof.				-0.041	0.052		-0.044	0.051	
Number of children in hh							0.017	0.024	
Gender of children in hh (ref = only boys)									
No children in hh							0.076	0.075	
Only girls							-0.131	0.047	***
Boys and girls							-0.068	0.047	
Common children status (ref = has none)									
Has common children							-0.029	0.070	
Nonresident children status (ref = has none)									
Has nonresident children							0.182	0.061	***
Intercept	1.050	0.013	***	1.005	0.048	***	0.966	0.089	***
Decrease in log likelihood (df)				28.02	(14)	**	80.35	(6)	***

Table 4: Fixed Effect Difference-in-Difference Model Estimates for Variables Predicting Mental Illness Score of Women (n = 3196)

Note: Mental Illness Score measured as log of Malaise Inventory Scale score.

* p < 0.10. ** p < 0.05. *** p < 0.01.

Tables 4 and 5 present results for women and men and there are some interesting differences. For women (Model 1, Table 4) female single parents, stepparents and partners of stepparents all had significantly higher risks of poor mental health. The effect for dual stepparents became non-significant once we controlled for demographic and socioeconomic variables (Model 2, Table 4), but the other effects remained stable. Once the additional household variables were included

(Model 3, Table 4) only partners of stepfathers had a significantly higher risk of poor mental health. Women in families with only female children had lower risks of poor mental health and having nonresident children increased the risks. For men, only those who were partners of stepmothers had a significantly different mental health risk and this was lower than for those in first families (Model 1, Table 5). Note that the equivalent parameter for women was significant and positive. This effect remained stable when demographic and socioeconomic factors were added to provide extra control (Model 2, Table 5) and when additional household variables were included within the model (Model 3, Table 5). The absence of children in the household significantly decreased the mental illness score for men.

	Model 1			Model 2			Model 3		
	B	SE B		B	SE B		B	SE B	
Age 42	0.058	0.025	**	0.062	0.040		0.041	0.061	
Family type (ref = 'first family') * age 42									
Single parent	0.048	0.083		0.005	0.117		-0.050	0.130	
Stepparent	0.045	0.069		0.020	0.073		-0.016	0.079	
Partner of stepparent	-0.173	0.086	**	-0.204	0.096	**	-0.214	0.101	**
Dual stepfamily	0.092	0.104		0.068	0.113		-0.009	0.131	
Marital status (ref = married)									
Never married single				0.011	0.045		0.017	0.049	
Remarried				0.019	0.077		0.023	0.078	
Cohabiting				0.025	0.067		0.022	0.068	
Separated/divorced				-0.010	0.105		0.000	0.108	
Widowed				-2.588	1.074	***	-2.638	1.079	***
Economic activity (ref = full-time working)									
Part-time working				0.211	0.125	*	0.205	0.126	
Unemployed				0.041	0.073		0.038	0.073	
Other not working				0.359	0.077	***	0.358	0.077	***
Highest qualification (ref = none)									
Secondary				0.037	0.050		0.038	0.051	
Vocational				-0.033	0.059		-0.030	0.059	
Professional				0.024	0.062		0.024	0.062	
Degree				0.173	0.103	*	0.175	0.103	*
Social class (ref = unskilled/partly skilled)									
Skilled				0.098	0.052	*	0.100	0.052	*
Managerial/prof.				0.052	0.060		0.053	0.060	
Number of children in hh							0.008	0.028	
Gender of children in hh (ref = only boys)									
No children in hh							-0.167	0.098	*
Only girls							-0.050	0.055	
Boys and girls							-0.014	0.055	
Common children status (ref = has none)									
Has common children							-0.137	0.089	
Nonresident children status (ref = has none)									
Has nonresident children							-0.001	0.071	
Intercept	1.013	0.015	***	0.900	0.058	***	1.058	0.111	***
Decrease in log likelihood (df)				83.94	(14)	***	8.59	(6)	

Table 5: Fixed Effect Difference-in-Difference Model Estimates for Variables Predicting Mental Illness Score of Men (n = 2648)

Note: Mental Illness Score measured as log of Malaise Inventory Scale score.

* p < 0.10. ** p < 0.05. *** p < 0.01.

7. DISCUSSION

This study is one of the first of its type to compare the mental health of stepparents, partners of stepparents, those in dual stepfamilies, those in 'first families' and single parents. There are good reasons to suppose that those living in stepfamilies have worse mental health, as it is often argued that these households are more stressful environments than 'first families'. The markedly higher divorce rates found in remarriages with stepchildren (Pryor & Rodgers, 2001) suggests that such stepfamily arrangements may contribute to marital instability and lower marital satisfaction, and that this may impinge on the health of those in stepfamilies. These previous findings therefore led us to examine whether adults living in stepfamilies have poorer mental health than similar adults living in first families. In the analysis we also distinguished between different types of stepfamily because past studies have suggested that outcomes for adults may differ according to the composition of stepfamilies.

An enduring problem when comparing the relationship between family type and mental health is the potentially confounding effect of selection processes. While it is quite possible that the higher rates of mental illness observed among stepparents and their partners, compared with those in 'first families', may have been influenced by living in a stepfamily, it is also possible that those with poorer mental health are more likely to enter stepfamily relationships in the first place. Cross-sectional analyses are limited in their ability to account for such selection effects because they are unable to investigate the temporal ordering of events. Evenson and Simon (2005), for example, showed a higher likelihood of depression among some types of stepparents compared with parents in first families, but they acknowledged in their discussion that this may partly be due to the selection into and out of stepfamilies by those with different levels of prior mental illness. In our analysis we therefore exploited longitudinal birth cohort data which includes detailed information about family status and mental health status at ages 23 (prior to entry into a stepfamily) and 42. This allowed us to explore the influence of changes in family status on mental health outcomes.

Our analysis indicated that there is indeed some selection into stepfamilies, whereby those with poor mental health were more likely to become stepparents. This is a clear justification for adopting the difference-in-difference methodology used

here, as this allowed us to consider change in mental health outcomes between the two ages. The findings highlight some interesting gender differences in outcomes. Only women appear to suffer significantly from being a stepparent, or the partner of a stepparent, and in each case these circumstances raised the risk of poor mental health. In contrast, none of these effects was significant for men, except that partners of stepmothers benefited in mental health terms. This finding suggests an opposite effect for men and women: being the partner of a stepparent was beneficial for men's mental health but detrimental for women's (compared to their counterparts in 'first families').We theorise that being the partner of a stepparent is a difficult position for women but a favourable position for men. This is perhaps not surprising because most men in this position will be nonresident fathers with a new partner (they may enjoy the company of a new partner, while not having the burden of day-to-day care for their own children). Women in this position are usually resident mothers, who have to juggle the interfamily relationships of their children and their new partner, and may feel responsible for the happiness of them all (Saint Jacques, 1996). They may have to deal with conflicting loyalties, between their children (who were probably used to having the undivided attention of their previously single mother), and their new partner (who possibly had no prior parenting experience).

For women the effects of family type were mediated by the presence of nonresident children in the family, the presence of common children in the family, and the gender of the children. We explored the gender of the children in the household as several stepfamily studies have looked at interactions of stepmothers and stepfathers with (step)sons and (step)daughters. For women, we found a very consistent negative effect (i.e. lowering their mental illness score) of having only girls compared with only boys. Apparently, raising sons puts more strain on women than raising daughters. Even though the literature suggests that raising boys is easier for men than raising girls, no significant effect on mental health at age 42 was found. Our findings offer an interesting refinement to the often replicated finding (e.g. Lundberg 2005) that raising boys has more positive effects than raising girls. Our study indicates that this general finding does not apply to stepfamilies, at least not for women. Once these variables were accounted for, only the partners of stepfathers had significantly worse mental health. For men, though, the inclusion of these variables

had no impact – the partners of stepmothers continued to have significantly better mental health.

Having a common child appeared to be associated with lower mental illness scores. The effect was larger for men than for women (although insignificant in the gender-specific models with the smaller samples). In interpreting the common child effect we have to bear in mind that it could partly be a selection effect: only those couples who are happy and are optimistic about their future together may go on to have a common child. Having nonresident children had a significant negative effect on mental health, but only for women. It is rarer for mothers not to live with their children, and there is a social stigma associated with it (Herrerias, 1994) (note that this category includes nonresident children who live in institutions, and who live on their own; 11% of respondents in our sample have at least one nonresident child living on his/her own).

As stepfamilies are on average larger than first families and adults in larger families generally have more mental health problems, we expected that controlling for number of children would be one of the variables that would mediate the effect of family type. But it was found that the effect of the number of children was not significant. Part of the reason for this may be that it was impossible to count all children as we did not have information about nonresident children of the respondent's partner.

We have found few other studies that explore the effects of living in a stepfamily on *adult mental health*, and none that address the possibility of selection into stepfamilies. Our results demonstrate the value of a longitudinal data analysis, which has allowed the subtlety of the relationship between living in a stepfamily and mental health to be explored in greater detail. Our study lends support to Coleman et al.'s (2000) plea for more longitudinal analyses of complex family circumstances. Our findings suggest that (mental) health outcomes for stepparents and their partners deserve more attention.

Many recent studies on the effects of marital transitions and marital status on mental health or psychological well-being (Blekesaune 2008; Wade & Pevalin 2004; Strohschein et al. 2005) find that divorced people have poorer mental health than others. The results of our study suggest that part of this divorce-effect may be attributable to stepfamily arrangements that divorcees live in. The complicated household composition, and difficulties in developing satisfactory adult-child relationships can take a strain on divorced adults' mental health.

Some limitations to our analysis should be recognised. First, while the longitudinal birth cohort data are an unparalleled resource, providing information at different stages of the life course, the cohort design of the NCDS means that our sample includes individuals from only one birth year. Our sample of adults living in stepfamilies reflects stepfamily life in the UK in the late 1990s/early 2000s, during which time stepfamilies were becoming a more common living arrangement in society, with their numbers increasing as a result of the growing divorce rate since the late 1980s. Yet, stepparents themselves still had few role models on whose experience they could draw. It is possible that some of the effects we report will weaken for more recent cohorts as stepparenting has become more common and the social stigma once attached to it has faded. The social stress model may not be applicable to recent and future stepfamilies if social discrimination against this group further weakens or disappears. Also, a growing number of (young) adults who enter stepparenthood in the 21st century will themselves have experienced living in a stepfamily as a child and this may influence how they cope as adults in stepfamilies. Further research on more recent birth cohorts may provide additional insights.

Second, the sample is also selective as some groups, such as male single parents, may be more likely than other groups to have been lost to follow up. A related potential problem of analysing mental health outcomes at age 42 is the selective attrition of stepfamilies, which may itself be related to mental health. By this we mean that at age 42 we do not observe people who had spent time in a stepfamily, but subsequently left the stepfamily because it affected their mental health. Such selective attrition would lead to an underestimation of the real effect of stepparenting on mental health, suggesting that our results may be conservative. As a sensitivity analysis we considered the risk of leaving a stepfamily (between ages 33 and 42) and

how it relates to mental health. We found that the effect is limited, and that it is therefore unlikely to introduce any serious sample bias (results available from the authors).

Third, several previous studies have recommended that the length of the partnership between partners should be taken into account, as it appears that parent-child relationships and marital quality in stepfamilies change over the years, either for good or for bad (Hetherington et al., 1992; Bray & Berger, 1993; Ganong & Coleman, 1997). Information about the length of the partnership would also provide additional empirical evidence for substantiating various theoretical perspectives, because temporary effects of stepparenting on mental health support the crisis theory while enduring effects provide support for the social role theory and/or social stress theory. Unfortunately, partnership duration could not be calculated in a reliable way for all respondents in the NCDS birth cohort sample.

Fourth, our analysis focuses on the UK and it is possible that the results for other countries may not be consistent. It is possible that social stigma and related stress effects may vary across countries and an interesting follow-up study could undertake a cross-national analysis of stepfamily mental health.

These limitations notwithstanding, this study provides convincing evidence of the influence of stepfamily life on adults' mental health. It also demonstrates important gender differences in these effects. For women, these family type differences in mental health appear to be caused by different circumstances relating to the (step)children in the household. Once these are accounted for, the family type variable becomes insignificant. For men, the positive effect on mental health of being a partner of a stepparent appears robust, even controlling for these additional variables relating to the circumstances of the children.

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